Texas Electronics

TB-2012M
TB-2012M-A
Barometric Pressure Sensor
User's Manual

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Texas Electronics, Inc.
5529 Redfield St.
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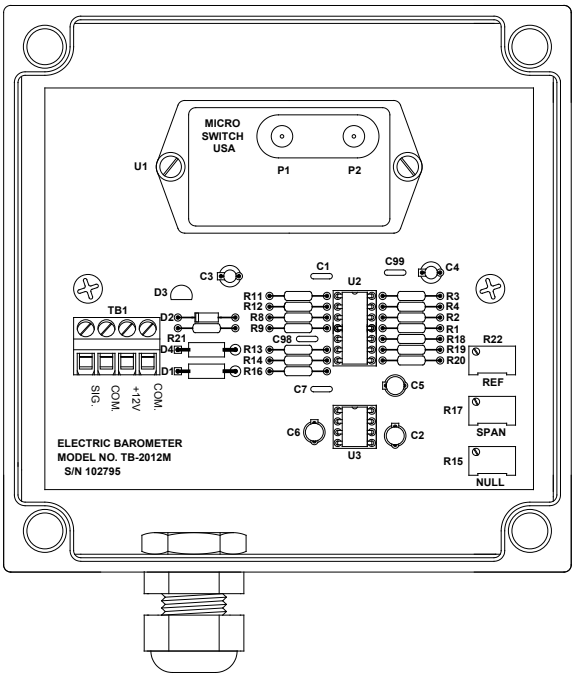
Model TB-2012M Barometer
Remove cover of TB-2012M and adjust for local pressure.
Refer to Pressure vs Voltage/Current Table under the Barometer section of the service manual.



Model TB-2012M Barometric Pressure Sensor

(Shown with cover removed)

DESCRIPTION

The Texas Electronics, Inc. TB-2012M Barometric Pressure Sensor uses an active solid-state device to sense barometric pressure. Self-contained electronics provide a regulated voltage to the solid-state sensor and amplification for the signal output. The unit's range of 26" to 32" of mercury, or 878 to 1080 mbar allows it to be used at elevations up to 1800 feet (548.64, meters) above sea level. The unit is temperature compensated from -18° to +50°C. If elevations above 1800 feet (548.64 meters) are required contact the factory for higher elevation calibration.

SPECIFICATIONS	TB-2012M	TB-2012M-A
Calibration Range:	26" to 32" (878 mb to 1080 mb)	26" to 32" (878 mb to 1080 mb)
Supply Voltage:	12 to 15 VDC	12 to 15 VDC
Current Draw:	<15 mA	<15 mA
Accuracy:	+/- 1.3 mb	+/- 1.3 mb
Operating Temperature Range:	-40° to +50°C	-40° to 50°C
Calibrated Temperature Range:	-18° to +50°C	-18° to 50°C
Output:	0-1 VDC	4-20 mA
Weight:	2 lbs. (.907 kg.) w/ 60' of cable	2 lbs. (.907 kg) w/ 60' of cable
Dimensions:	6" H x 5" W x 3" D	6" H x 5" W x 3" D
	(15.24 cm x 12.7 cm x 7.62 cm)	15.24 cm x 12.7 cm x 7.62 cm)
Warranty:	3 years	3 years

FEATURES & BENEFITS

- Interfaces to virtually all data acquisition systems
- Can be used up to 1800 ft. elevation without factory modification
- Over 1800 ft. elevation applications available
- Easy installation and maintenance
- Over 5 years in production
- Weatherproof NEMA nclosure for superior protection outdoors
- Wide range of 26” to 32” Hg. or 878 to 1080 mbar

INSTALLATION & MAINTENANCE

Select a site where the instrument will not be subject to rapid fluctuations of temperature or to jarring and continuous vibration. Avoid exposing the instrument to direct sunlight or radiant heaters and to direct drafts such as open windows and doors. A mounting bracket with hardware is attached to the Nema enclosure of the sensor.

ORDERING INFORMATION

Model #	Description
TB-2012M	Barometric Pressure Sensor
TB-2012M-A	Barometric Pressure Sensor, 4-20 mA

Optional Parts / Accessories

High Elevation:	Applications of higher than 1800 ft. (548.64 meters) above sea-level require factory modification.

TB-2012M ALTITUDE SETTING INSTRUCTIONS

To set barometer to your elevation, follow the instructions listed below:

Output:	0-1V
Range:	26 to 32”
	.1666V/Inch
	.001666V/.01 Inch

Obtain local barometric pressure from NOAA, NWS, airport, radio/TV station, or from any facility that would have the most accurate information closest to your installation.

Digital or analog indicators remove the four cover screws from the TB-2012M and adjust the null pot (R15) until your output agrees with the reference obtained. You may want to do this more than once particularly if the weather is unsettled at the time.

By using the chart below and the following conversion, it is very easy to set up.

Example:

If the pressure reading that you obtained is 29.13”:

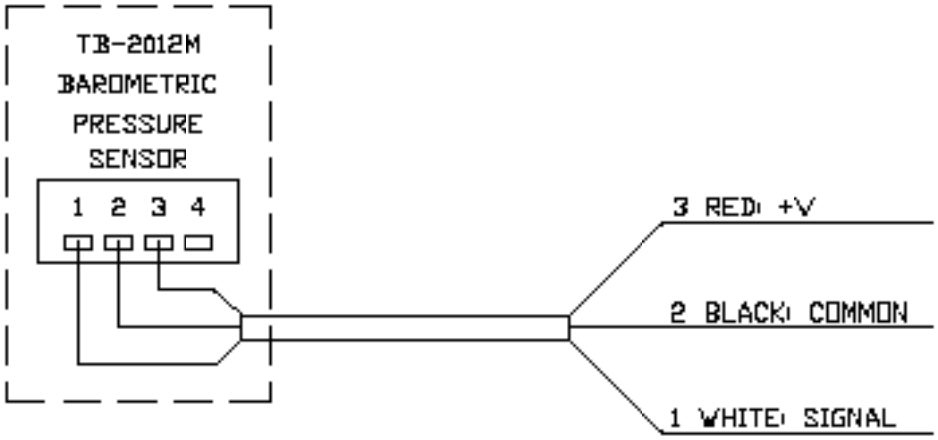
From the chart below:

Choose 29, which is .500 V.
Then multiply, 13 x .00166 V. = .0216 V.
.5 V. + .0216 V. = .52160 V. should be the proper output.
Set null pot (R15) until that voltage output is obtained.

26”	=	.00 V.
27”	=	.166V.
28”	=	.333V.
29”	=	.500V.
30”	=	.666V.
31”	=	.833V.
32”	=	1.000V.

Replace cover and secure evenly. System should not require further calibration or setup.

WIRING DIAGRAM



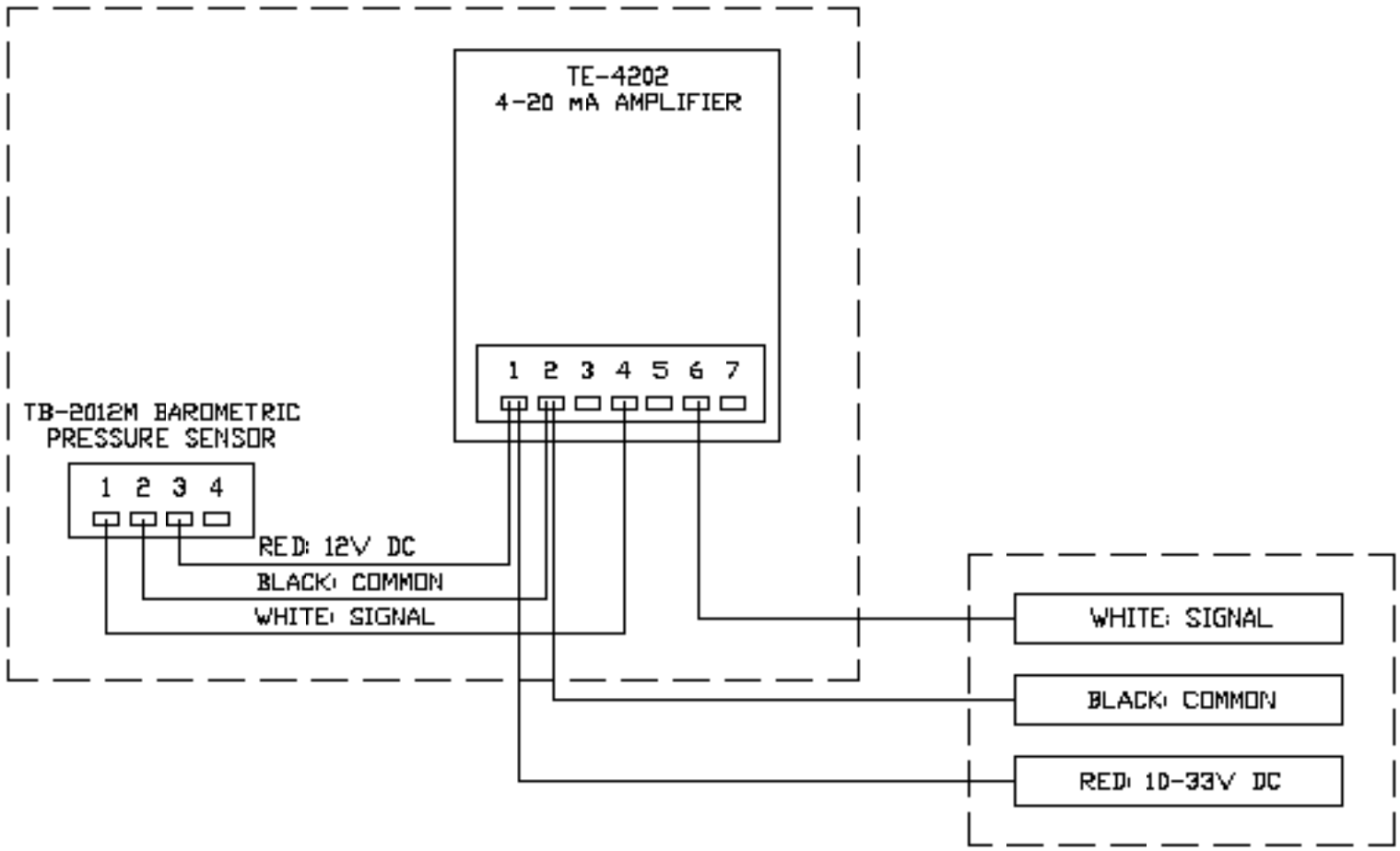
TYPICAL RANGE
26" to 32"
878mb to 1080mb

OUTPUT
0-1 VDC

Texas Electronics, Inc.
The Gold Standard in Weather Instrumentation Since 1957

TITLE: TB-2012M BAROMETRIC PRESSURE WIRING DIAGRAM			
SIZE: A	FSCM NO.	DWG NO. 3003	REV: A
SCALE		SHEET 1-1	

WIRING DIAGRAM



TYPICAL RANGE
26" to 32"
878mb to 1080mb

OUTPUT
4 to 20 mA

Texas Electronics, Inc.
The Gold Standard in Weather Instrumentation Since 1957

TITLE: TB-2012MA BAROMETRIC PRESSURE			
SIZE: A	FSCM NO.	DWG NO.: 3002	REV: B
SCALE		SHEET 1-1	

Warranty

Texas Electronics, Inc. (hereafter TEI) warrants the equipment manufactured by it to be free from defects in material and workmanship. Upon return, transportation charges prepaid to TEI, within three (3) years of original shipment of sensors and one (1) year of original shipment of electronics, recorders and indicators, TEI will repair or replace, at its option, any equipment which it determines to contain defective material or workmanship, and will return said equipment to purchaser, F.O.B., TEI. Texas Electronics shall not be obligated however to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way. TEI will not be responsible for any dismantling, re-assembly, or reinstallation charges.

This warranty is in lieu of all other warranties, expressed or implied. TEI shall not be liable for any special, indirect, incidental or consequential damages claimed in connection with any rescission of this agreement by purchaser.